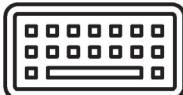


Appendix D Connector Pins

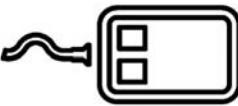
This appendix contains the pin assignments for many workstation connectors. Some of these connectors might not be used on the product being serviced. This appendix contains the following sections:

- “Enhanced Keyboard” on page 164
- “Mouse” on page 164
- “Ethernet RJ-45” on page 164
- “Parallel Interface” on page 165
- “Serial Interface” on page 165
- “USB” on page 165
- “Microphone” on page 166
- “Headphone” on page 166
- “Line-In Audio” on page 166
- “Line-Out Audio” on page 166
- “Ultra SCSI” on page 167
- “SATA” on page 167
- “Monitor” on page 168
- “ATA/ATAPI (IDE) Standard Drive Cable” on page 168
- “24-Pin Power” on page 169
- “4-Pin Power (for CPU)” on page 169
- “6-Pin PCI Express” on page 169
- “DVI-I Signals” on page 170

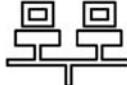
Enhanced Keyboard

Connector and Icon		Pin	Signal
		1	Data
		2	Unused
		3	Ground
		4	+5 VDC
		5	Clock
		6	Unused

Mouse

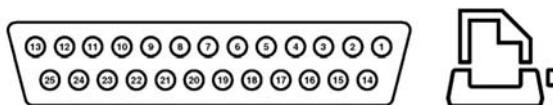
Connector and Icon		Pin	Signal
		1	Data
		2	Unused
		3	Ground
		4	+5 VDC
		5	Clock
		6	Unused

Ethernet RJ-45

Connector and Icon		Pin	Signal
		1	(+) Transmit Data
		2	(-) Transmit Data
		3	(+) Receive Data
		4	Unused
		5	Unused
		6	(-) Receive Data
		7	Unused
		8	Unused

Parallel Interface

Connector and Icon



Pin	Signal	Pin	Signal	Pin	Signal
1	Strobe	7	Data Bit 5	13	Select
2	Data Bit 0	8	Data Bit 6	14	Auto Linefeed
3	Data Bit 1	9	Data Bit 7	15	Error
4	Data Bit 2	10	Acknowledge	16	Initialize Printer
5	Data Bit 3	11	Busy	17	Select IN
6	Data Bit 4	12	Paper End	18–25	Signal Ground

Serial Interface

Connector and Icon



Pin	Signal
1	Carrier Detect
2	Receive Data
3	Transmit Data
4	Data Terminal Ready
5	Signal Ground
6	Data Set Ready
7	Request to Send
8	Clear to Send
9	Ring Indicator

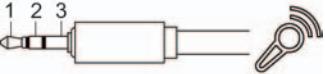
USB

Cable connector and Icon

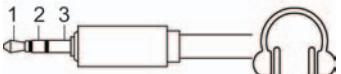


Pin	Signal
1	+5 VDC
2	- Data
3	+ Data
4	Ground

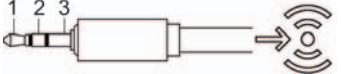
Microphone

Connector and Icon (1/8")	Pin	Signal
	1 (Tip) 2 (Ring) 3 (Shield)	Audio Power Ground

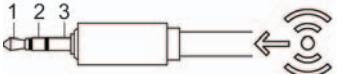
Headphone

Connector and Icon (1/8")	Pin	Signal
	1 (Tip) 2 (Ring) 3 (Shield)	Audio_Left Audio_Right Ground

Line-In Audio

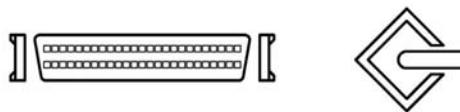
Connector and Icon (1/8")	Pin	Signal
	1 (Tip) 2 (Ring) 3 (Shield)	Audio_In_Left Audio_In_Right Ground

Line-Out Audio

Connector and Icon (1/8")	Pin	Signal
	1 (Tip) 2 (Ring) 3 (Shield)	Audio_Out_Left Audio_Out_Right Ground

Ultra SCSI

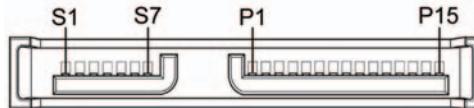
Connector and Icon



Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1–11	Ground	29	DB3	37	Reserved	45	RST #
12	Reserved	30	DB4	38	TERMPWR	46	MSG #
13	Open	31	DB5	39	Reserved	47	SEL #
14	Reserved	32	DB6	40	Ground	48	C/D
15–25	Ground	33	DB7	41	ATN #	49	REQ #
26	DB0	34	DBP	42	Ground	50	Input/Output
27	DB1	35	Ground	43	BSY #		
28	DB2	36	Ground	44	ACK #		

SATA

Connector



Pin	Usage	Pin	Usage	Pin	Signal
Data Cable		Power Cable		Power Cable	
S-1	Ground	P-1	3.3 V power	P-8	5V power
S-2*	A+	P-2	3.3 V power	P-9	5V power
S-3**	A-	P-3	3.3 V power	P-10	Ground
S-4	Ground	P-4	Ground	P-11	Reserved
S-5**	B-	P-5	Ground	P-12	Ground
S-6**	B+	P-6	Ground	P-13	12V power
S-7	Ground	P-7	5V power	P-14	12V power
*S-2 and S-3 differential signal pair				P-15	12V power
**S-5 and S-6 differential signal pair					

*S-2 and S-3 differential signal pair

**S-5 and S-6 differential signal pair

Monitor

Connector and Icon



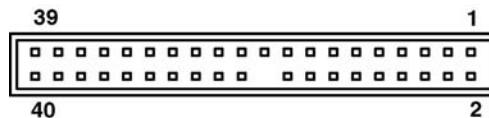
Pin	Signal	Pin	Signal	Pin	Signal
1	Red Analog	6	Ground	11	Monitor ID
2	Green Analog	7	Ground	12	DDC Serial Data
3	Blue Analog	8	Ground	13	Horizontal Sync
4	Monitor ID	9	+5 V DC	14	Vertical Sync
5	Ground	10	Ground	15	DDC Serial Clock

NOTE Monitor connectors might vary depending on your configuration.



ATA/ATAPI (IDE) Standard Drive Cable

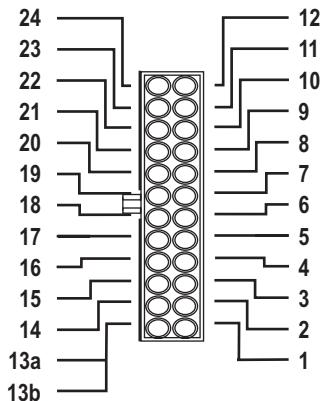
Connector



Pin	Signal	Pin	Signal	Pin	Signal
1	Reset	15	DD1	29	DMAK
2	Ground	16	DD14	30	Ground
3	DD7	17	DD0	31	INTRQ
4	DD8	18	DD15	32	IOCS16
5	DD6	19	Ground	33	DA1
6	DD9	20	(Key)	34	PDIAG (cable detect)
7	DD5	21	DMARQ	35	DA0
8	DD10	22	Ground	36	DA2
9	DD4	23	DIOW	37	CS1FX
10	DD11	24	Ground	38	CS3FX
11	DD3	25	DIOR	39	DASP
12	DD12	26	Ground	40	Ground
13	DD2	27	IORDY		
14	DD13	28	CSEL		

24-Pin Power

Connector



Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	+3.3 V	7	GND	13	+3.3 V	19	GND
2	+3.3 V	8	POK	14	-12 V	20	NC
3	GND	9	+5 Vaux	15	GND	21	+5 V
4	+5 V	10	+12 V	16	PSON	22	+5 V
5	GND	11	+12 V	17	GND	23	+5 V
6	+5 V	12	+3.3 V	18	GND	24	GND

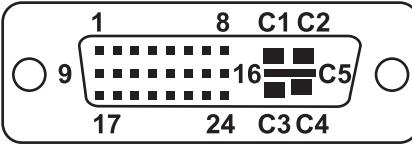
4-Pin Power (for CPU)

Connector and Icon	Pin	Signal
	1	GND
	2	GND
	3	+12 V
	4	-12 V

6-Pin PCI Express

Connector and Icon	Pin	Signal
	1	+12 V
	2	+12 V
	3	+12 v
	4	GND
	5	GND
	6	GND

DVI-I Signals

Connector and Icon	Pin	Signal
	1	TMDS Data2 -
	2	TMDS Data2 +
	3	TMDS Data2/4 shield
	4	TMDS Data4 -
	5	TMDS Data4 +
	6	DCC Clock (SCL)
	7	DCC Bi-directional Data (SDA)
	8	Analog Vertical Sync
	9	TMDS Data1 -
	10	TMDS Data1 +
	11	TMDS Data1/3 shield
	12	TMDS Data3 -
	13	TMDS Data3 +
	14	+5V DC Power
	15	Ground Return: +5V, Hsync, Vsync
	16	Hot Plug Detect
	17	TMDS Data0 -
	18	TMDS Data0 +
	19	TMDS Data0/5 shield
	20	TMDS Data5 -
	21	TMDS Data5 +
	22	TMDS Clock shield
	23	TMDS Clock +
	24	TMDS Clock -
	C1	Analog Red
	C2	Analog Green
	C3	Analog Blue
	C4	Analog Horizontal Sync
	C5	Analog Ground Return: analog Red, Green, Blue